March 4, 2010

Mr. Scott Head, Manager
Regulatory Affairs
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 322 RELATED TO SRP SECTION 7.1 FOR THE SOUTH TEXAS PROJECT COMBINED LICENSE APPLICATION

Dear Mr. Head

By letter dated September 20, 2007, STP Nuclear Operating Company (STP) submitted for approval a combined license application pursuant to 10 CFR Part 52. The U. S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application. By letter dated October 30, 2009, STP submitted a report with the methodology for determining Technical Specification instrumentation setpoints.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, I can be reached at 301-415-4093 or by e-mail at Adrian.Muniz@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Adrian Muñiz, Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking No. 4241

Enclosure:
Request for Additional Information

cc:

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Request for Additional Information

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***Approval captured electronically in the electronic RAI system.**

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Request for Additional Information No. 4241 Revision 3

3/3/2010

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 07.01 - Instrumentation and Controls - Introduction
Application Section: Chapter 7

QUESTIONS for Instrumentation, Controls and Electrical Engineering 2 (ESBWR/ABWR Projects) (ICE2)

07.01-15

Request for Additional Information for STP Setpoint Methodology

10 CFR 50.36(c)(1)(ii)(A), "Technical Specifications," requires that, where a limiting safety system setting (LSSS) is specified for a variable on which a safety limit has been placed, the setting be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded. LSSSs are settings for automatic protective devices related to variables with significant safety functions. Setpoints found to exceed technical specification limits are considered as malfunctions of an automatic safety system. Such an occurrence could challenge the integrity of the reactor core, reactor coolant pressure boundary, containment, and associated systems.

The NRC staff has the following request for additional information with regards to WCAP-17119-P, Revision 0, "Methodology for South Texas Project Units 3 and 4 ABWR Technical Specification Setpoints:"

1. According to Figure 3-1 in WCAP-17119-P, the "as left" tolerance is same as the "as found" tolerance for the rack. Whereas Section 2.2, "Sensor Allowances" states that sensor calibration accuracy (SCA) is the difference between the "as left" value and the desired value, and Sensor drift (SD) is the difference between "as found" value and the "as left" value. Also as stated in Section 2.3, "Rack Allowances," rack calibration accuracy (RCA) is the difference between the "as left value and the desired value, and Rack drift (RD) is the difference between the "as found" and "as left" values. The applicant is asked to resolve the above stated discrepancies and clarify whether the "as left" value is same as the "as found" value, and also provide a description for the desired value.

2. From evaluation of WCAP-17119-P, the staff was unable to determine the uncertainty components that make up the "As Found Tolerance" and "As Left" values. The applicant is asked to provide the uncertainties components used to calculate the "As Left" and "As Found" values for each of the sensor and rack.

3. As defined in Section 3.2 of WCAP-17119-P, Margin is calculated by subtracting Channel Statistical Allowance (CSA) from Total Allowance (TA), and TA is calculated by subtracting Nominal Trip Setpoint (NTS) from Safety Analysis Limit (SAL). Since there are two unknowns namely; Margin and NTS, the staff is unable to identify the method used for determining the Margin and/or NTS. The applicant is asked to provide the criteria for determining Margin and/or NTS.

4. From evaluation of WCAP-17119-P, the staff believes that “As Found” and “As Left” values are significant in determining the NTS. Therefore, the applicant is asked to include the “As Left” and “As Found” tolerance values to the Tables 3-xx containing the uncertainties components for calculation of CSA for various functions.

5. According to WCAP-17119-P Section 3.2, “Definitions for Protection System Setpoint Tolerances,” the “as found” tolerance for instrument racks equals the instrument process rack calibration accuracy (RCA) defined in the uncertainty calculations, whereas the “as found” tolerance for transmitters is defined as the sensor drift (SD) magnitude. This definition for As Found Tolerance also states, “On a first pass, channel operability is defined as the ability to maintain calibration or be restored to within the calibration accuracy.” The applicant is asked to explain how drift is accounted for determination of channel operability.

6. 10 CFR 50.36 (c) (1) (ii) (A) states that the limiting safety system settings (LSSS) are settings for automatic protective devices related to those variable having significant safety functions. The applicant is asked to clarify which setting is represented as LSSS.